



REV A January 2011

Oscilent Controlled Document

Ordering Code / Part Number	Product Description
820-IF221.288M-D	21.288 MHz Bandpass Filter 7.08MHz Bandwidth

### Specification Contents

- o Mechanical Dimensions
- o Test Circuit
- o Maximum Ratings
- o Electrical Specification
- o Frequency Response

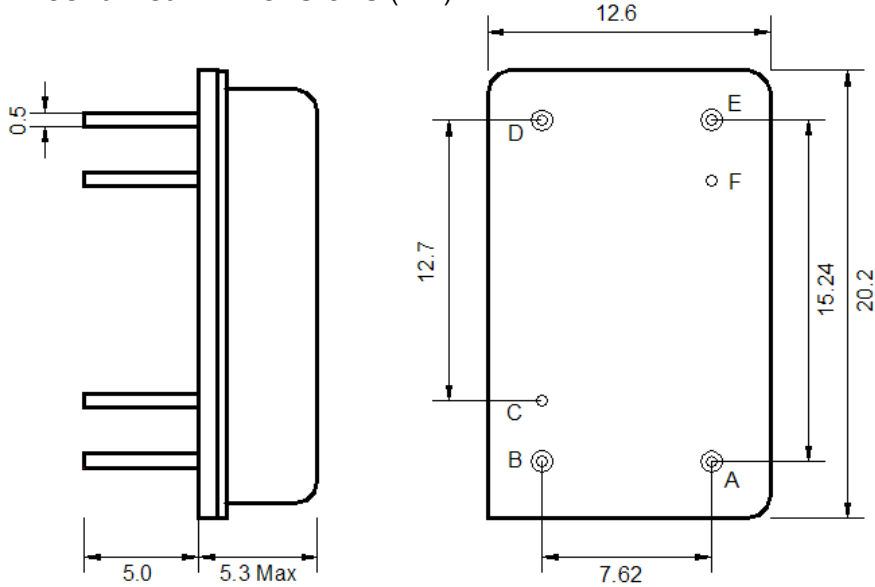
### Notes

- o Electrostatic Sensitive Device (ESD) 
- o Avoid excessive ultrasonic exposure
- o Solderability compatible with JEDEC J-STD-020C Pb-free process, 260°C peak reflow temperature
- o This product complies with EU directive 2002/95/EC (RoHS compliance)



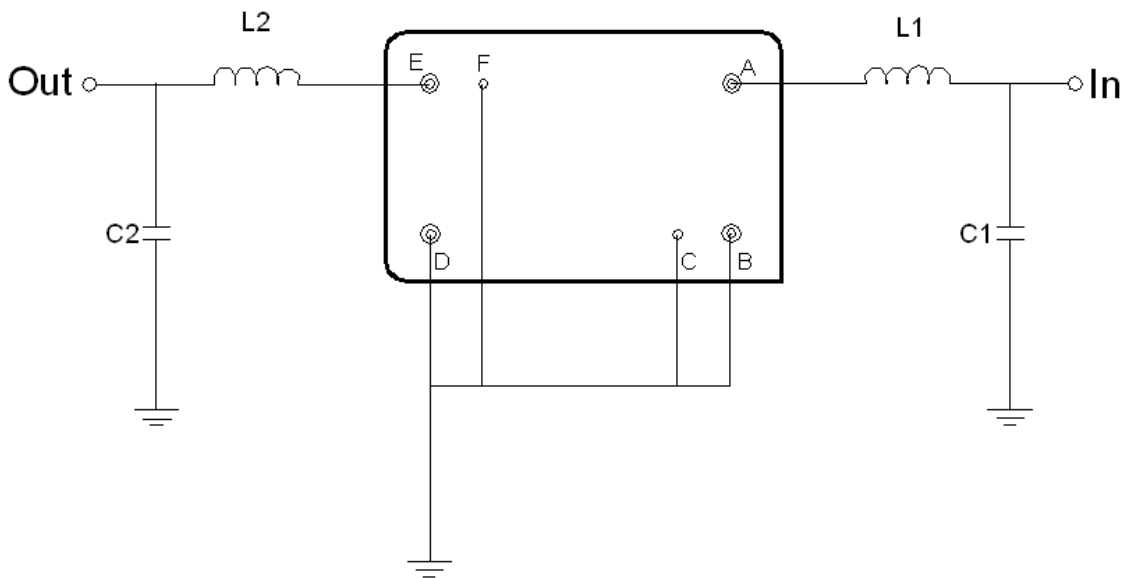


## Mechanical Dimensions (mm)



Pin Description	
B, C, D, F	Ground
A	Input
E	Output

## Test Circuit



Test Fixture & Values	
Input	L1=39nH, C1=36pF
Output	L2=39nH, C2=30pF
Source/Load Impedance	50 Ω



## Maximum Ratings

Parameters Description	Unit	Minimum	Typical	Maximum
Operating Temperature Range	°C	-30	-	+80
Storage Temperature Range	°C	-40	-	+85
Maximum DC Voltage	V	-	-	10
Maximum Input Power	dBm	-	-	10
Source Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
Load Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-

Notes: With Matching Network (Ref. Testing Environment Circuit as shown above).

Those impedances could be modified with different impedance values and/or structures, if necessary.

## Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	221.288	-
Insertion Loss at Fo	dB	-	24.5	26.0
Amplitude Ripple	dB <sub>p-p</sub>	-	0.7	1.2
Group Delay Variation (smo 0.5%)	nsec	-	120	
Absolute Delay at Fo	μsec	-	2.41	-
Temperature Coefficient	ppm/°C	-	-0.03	-
Bandwidth at -1.0 dB	MHz	-	6.86	-
Bandwidth at -3.0 dB	MHz	-	7.08	-
Bandwidth at -10.0 dB	MHz	-	7.46	-
Bandwidth at -40.0 dB	MHz	-	8.04	-
Ultimate Rejection	dB	45	50	-



### Frequency Response

